**IBM**

WebSphere® software

IBM WebSphere Host Access Transformation Services, Version 6.0

Highlights

■ *Transforms 3270 and 5250 screens into HTML dynamically*

■ *Extends one or more host applications to the Web within hours, without having to access or modify source code*

■ *Provides programmed access to host transactions through standard Web-services interfaces*

■ *Offers easy-to-use drag-and-drop panel customization*

■ *Provides wizards to customize HATS components and widgets*

■ *Helps you create JavaServer Faces pages from integration objects to enable easier Web-page design*

IBM WebSphere® Host Access Transformation Services (HATS) gives you the tools you need to quickly and easily extend your legacy applications to business partners, customers and employees. HATS helps make your 3270 and 5250 applications available as HTML through the most-popular Web browsers, while converting your host screens to a Web-like look and feel. And because HATS provides a zero-footprint Web-to-host solution, the only software needed on the client is a Web browser.

A key advantage in implementing HATS is ease of use. One or more host screens are converted to GUIs on the fly, in real time. And with the HATS rules-based transformation engine, you can easily improve the workflow and navigation of host applications without having to access or modify source code. As a result, you can usually have your host applications online with a familiar Web interface within a day of loading the program.
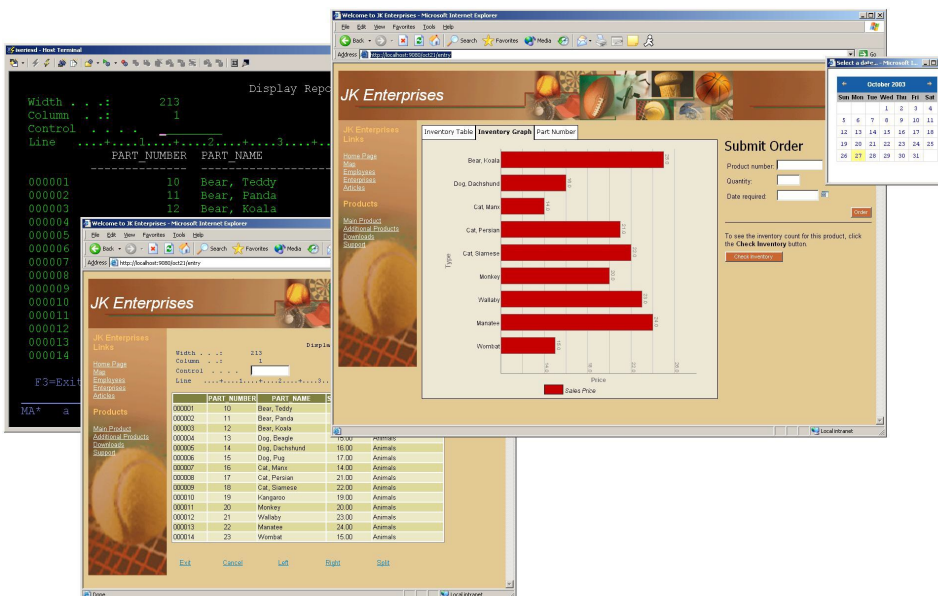
With IBM WebSphere Host Access Transformation Services, you can extend host applications to the Web quickly and add customization at your own pace.

ON DEMAND BUSINESS™

Get on the Web quickly

When you begin a HATS project, a wizard prompts you for basic information, such as the host address. You then select a template for the project. In HATS terminology, a *template* is an HTML file that serves as the background for all your panels. You can choose one of the templates included with HATS, or you can choose to use your own HTML file by dragging and dropping HTML elements, such as logos, graphics, animations or Web links to create a new, customized template. You can also choose not to use a template. For example, you might want HATS to look like a traditional emulator. After choosing your template, you can deploy the project to either WebSphere Application Server or WebSphere Portal.

Your host application can now be delivered as HTML to your users' Web browsers. All your screens are converted on the fly according to HATS default rules. Your menus and lists are displayed as hot links, and your input fields as HTML text-input boxes. Your function (PF) keys are buttons, with only the active ones displayed, and your logos and graphics appear as they would on any other Web page.

Customize at your own pace

After you have deployed your host application, you might decide to add customization to the project. With HATS, you have the ability to select individual screens or groups of screens to be uniquely customized. Because HATS is rules-based, a set of rules that you create to customize a single host screen can easily be applied to numerous screens that share similar customization requirements. So although you might create just a few rule sets, you can customize an unlimited number of screens according to these rules. HATS allows you to spend time on the high-traffic and high-value screens — the screens where most of the action and most of the value resides in your host application. Other screens can be converted to a GUI according to the project's default rules.

Your rule sets can be created with HATS easy-to-use graphical tools. To create a rule set, you simply select the HATS option for the topic you want to work with on the screen — like a selection list. You can then select the option that describes how you want HATS to transform that screen element if it is found — and convert it to an option list, for example. You can also insert HTML elements, such as graphics and Web links, in any rule set.

HATS offers tremendous flexibility for extending your Web-to-host implementation over time. One significant advantage of HATS is that you need to invest only minimum time and resources to get started. You can use HATS to quickly deploy your legacy applications to the Web and deliver immediate value to your business. Later, you can add user-productivity enhancements at your own pace. HATS does not require you to customize each screen. Instead, HATS uses the default rules to convert any unassigned host screens to GUIs, while customizing all assigned screens according to the rule sets you have created. For this reason, HATS doesn't stop working if you make changes to the host application.

Boost productivity, help reduce training costs

Training new users on host applications costs time and money. Today's mobile workforce often does not have the time or inclination to learn to navigate complex legacy systems. And your business partners and customers want a familiar interface on which they can become productive right away. Using HATS, you can present them with a graphical interface that makes your company look modern and up-to-date.

Host applications are performing mission-critical roles in your organization. With a little help on the front end, they can continue to be valuable contributors for many years. With a minimum of time and resources, IBM WebSphere Host Access Transformation Services can help rejuvenate your host applications, allowing your organization to continue to benefit from its substantial investment in legacy systems for years to come.

Maximize ease of use

The power of HATS lies in its ability to accurately recognize and transform one or more host screens in real time to a Web interface, according to a set of predetermined rules. A collection of default rules is included with the product. You can easily modify these rules to accommodate your specific needs and tastes.

HATS offers you the capability to assign different rule sets to different end-user communities. You can give a single host application a variety of looks that are appropriate for different user groups. Alternatively, you can use a single rule set on different applications, allowing you to reuse your work across multiple legacy applications.

IBM HATS Toolkit includes a variety of options, or *widgets*, to transform host-screen elements into HTML panel components. Widgets include drop-down lists, radio buttons, hot-link lists, button tables and bar graphs. You can also customize these widgets or create your own to meet your specific requirements.

HATS macro support lets you provide programmed navigation through multiple legacy screens. For example, you can choose to have the first screen users need to see displayed immediately, bypassing all screens in between. Or you can combine data from multiple host screens, as well as multiple data sources, into a single HATS screen. HATS macros are easy to generate and allow you to streamline user interactions with host applications. HATS can also use macros created in IBM WebSphere Host On-Demand software.

Improve your GUI

With HATS, you can add drop-down lists, tables, radio buttons, tabbed folders and other features to your host screens to help users become more productive. Your users can point and click their way through your entire host application — just like on the Web. Instead of having to use their keyboards, users can click PF keys. They can also click the word that describes a key's function. For example, when users need assistance, they can simply click the word *Help*. A user can

also access input fields with the mouse instead of having to use tabs or arrow keys to navigate the screen. With IBM WebSphere Host Access Transformation Services, users of your legacy applications have the same familiar experience they have when using other Web applications.

Enhance presentation with HTML

Not only can HATS make your GUI more functional, it can also improve your GUI's appearance by adding HTML components. Adding HTML to your host screens is easy — from logos and graphics to pictures and backgrounds. With HATS, you can give your host applications the same look and feel as your Web applications. For example, you can add Web links along the side of your panel or anywhere else you like. You not only have the power to design screens how you choose, you can present your business in a way that is professional and appropriate, without sacrificing the value of your legacy applications.

Create new applications

HATS, together with IBM Rational® Software Development Platform, provides a flexible and extensible environment you can leverage to integrate host applications with Java™ technology-based applications. You can combine screens and data from multiple host

sources with Java technology-based applications to create new IBM WebSphere applications. You can encapsulate transactions with host systems into reusable business objects, such as Web services, Java beans or Enterprise JavaBeans (EJB). And you can use HATS and IBM Rational Software Development Platform wizards to create Web pages that call these new business objects. You can also use IBM Rational Software Development Platform wizards to create Structured Query Language (SQL) queries and business objects (Web services, Java beans or EJB) to implement these SQL queries.

Create Web services from programmed navigation of host applications
HATS, in conjunction with IBM Rational Software Development Platform, helps simplify the creation of standard Web-services interfaces to provide access to host applications. Web-services protocols, such as Simple Object Access Protocol (SOAP) and Web Services Description Language (WSDL), provide an efficient and reusable means to standardize access to your host systems, helping you lower the cost to maintain and deploy connectors to these systems.

Integrate robust portal function
Portals have become increasingly popular as a way to maximize business flexibility while minimizing screen space. IBM WebSphere Portal provides a personalized, single point of access to enterprise information. HATS can run directly in the WebSphere Portal environment and take advantage of integration with other portlets in the portal. Features, such as click-to-action and cooperative portlets, allow higher levels of productivity by sharing data between portlets. Credential vault and Web express logon support can help users simplify the process of signing on and providing credentials to multiple applications. HATS works with IBM Tivoli® Access Manager or other vendor products to provide support for Web express logon.

Optimize security functions and scalability with WebSphere Application Server and WebSphere Portal
HATS offers a broad range of security features. It also leverages the security-rich features provided by IBM WebSphere Application Server and WebSphere Portal. Secure Sockets Layer (SSL) and Secure HTTP (HTTPs) provide robust security between the host application, the midtier server and the end user. HATS appears as a typical user to your host application, allowing you to take advantage of existing access security systems, such as IBM Resource Access Control Facility (IBM RACF®).

The run-time components of HATS are generated by HATS Toolkit and deployed to WebSphere Application Server or WebSphere Portal. The IBM WebSphere platform provides support for the workload-management features required for enterprise-class scalability and availability. Load-balancing and failover support functions, such as vertical and horizontal clustering, are handled by the WebSphere workload management capability. Clustering allows requests to be distributed across multiple application servers, providing fault tolerance. If one application server fails, a user request can be processed by one of the remaining application servers.

Provide efficient session pooling
HATS includes the ability to create connection pools that can be used at run time to cache connected, logged-on and established host connections. A predefined number of connections can remain active in the pool, supporting requests from any user. This function can help eliminate the overhead of establishing a connection, logging on and disconnecting for each host request. You can define the minimum and maximum number of connections in the pool, as well as determine whether HATS should wait for an available connection or create a new, nonpooled connection if all predefined connections are in use.

An Eclipse technology-based development environment

HATS Toolkit is fully integrated within the Eclipse technology-based IBM Rational Software Development Platform. It offers an intuitive interface and easy-to-use wizards for customizing the rules for transformation of legacy screens. The Eclipse platform is an industry-standard application-development environment, providing the benefits of a common framework and reusable skill set for development of Web-based applications. Integration within IBM Rational Software Development Platform delivers a common tooling family for your on demand business needs. The application-development features provide a variety of other benefits, such as team-development facilities that enable code management across multiple developers.

An extensible solution with HATS open architecture

Out of the box, HATS is a robust tool. But HATS benefits are not limited to just improving your GUI. Because it's built on industry-leading WebSphere software using a Java 2 Platform, Enterprise Edition (J2EE) architecture, HATS has virtually unlimited flexibility and extensibility. Using custom Java

development, you can extend HATS to integrate with other legacy systems or J2EE applications. For example, you can use EJB to add business logic to a HATS project.

HATS also supports global variables, allowing you to streamline your applications and reduce the amount of input required by your end users. With more customization, global variables provide further capabilities for moving data between your host application and other applications and databases. The HATS open architecture helps maximize your ability to improve the productivity of your host applications.

IBM WebSphere Host Integration Solution

IBM WebSphere Host Access Transformation Services is part of the market-leading IBM Host Integration family of host access and Web-to-host solutions. HATS complements WebSphere Host On-Demand and is available both within the IBM WebSphere Host Integration Solution or as a stand-alone solution.

For more information

To learn more about IBM WebSphere Host Access Transformation Services, contact your IBM representative or IBM Business Partner, or visit:

ibm.com/software/webservers/hats
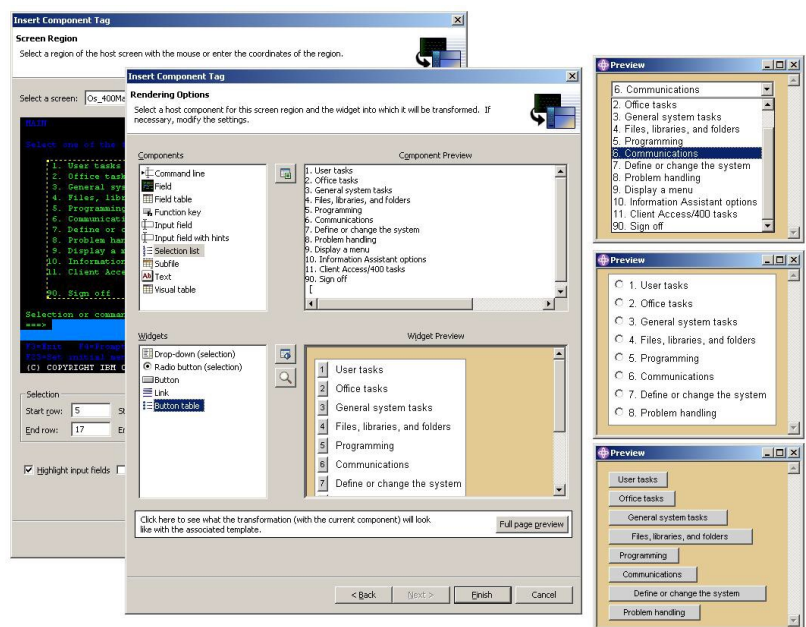
WebSphere Host Access Transformation Services Toolkit lets you quickly and easily customize your host applications.

IBM WebSphere Host Access Transformation Services, Version 6.0 at a glance

Hardware requirements

HATS Toolkit requirements
- Intel® Pentium® III 800MHz processor (or equivalent) minimum; later recommended
- 768MB RAM minimum; 1GB RAM recommended
- Disk space: 300MB direct access storage device (DASD) beyond what IBM Rational Studio requires; additional disk space required for resources that you develop
- Display resolution: 1024 x 768 or higher

Software requirements

HATS Toolkit requirements
- Microsoft® Windows® XP Professional with Service Pack (SP)1 and SP2
- Microsoft Windows 2000 Professional with SP3 and SP4
- Microsoft Windows 2000 Server with SP3 and SP4
- Microsoft Windows 2000 Advanced Server with SP3 and SP4
- Microsoft Windows Server 2003 Standard Edition or Windows Server 2003 Enterprise Edition
- One of the following IBM Rational Software Development Platform products:
  - IBM Rational Web Developer, Version 6.0
  - IBM Rational Application Developer, Version 6.0
  - IBM Rational Studio Architect, Version 6.0

Server run-time requirements

HATS enterprise applications can be deployed to the following WebSphere Application Server platforms:
- Windows 2000
- Windows 2003
- Windows XP
- IBM AIX®
- IBM i5/OS™
- Sun Solaris operating environment
- IBM z/OS®
- Linux® for Intel
- Linux for IBM @server® zSeries®
- Linux for IBM @server iSeries™
- Linux for IBM @server pSeries®

Notes:
1. HATS applications are deployed to a WebSphere Application Server instance, and therefore share the software and hardware requirements of WebSphere Application Server.
2. Each HATS application that you deploy requires additional disk space. The minimum disk space required for each HATS application is approximately 30MB.

One of the following WebSphere Application Server products:
- WebSphere Application Server, Version 5.1.1 or Version 6.0 with latest program temporary fixes (PTFs)
- WebSphere Application Server Network Deployment, Version 5.1.1 or Version 6.0 with latest PTFs
- WebSphere Application Server for iSeries, Version 5.1.1 with latest PTFs
- WebSphere Application Server Network Deployment for iSeries, Version 5.1.1 with latest PTFs
- WebSphere Application Server Express, Version 5.1.1 or Version 6.0 with latest PTFs
- WebSphere Application Server for zSeries, Version 5.1.1 with latest PTFs

IBM WebSphere Host Access Transformation Services, Version 6.0 at a glance (continued)

Supported browsers
- Windows requires Netscape, Version 6.2.3 or later; Microsoft Internet Explorer, Version 6.0 with SP1 or later; Mozilla, Version 1.6 or later; Firefox, Version 0.9 or later; or Opera, Version 7.0 or later.
- AIX requires Netscape, Version 7.0 or later.
- Sun Solaris operating environment requires Mozilla, Version 1.6 or later; Firefox, Version 0.9 or later; or Opera 7.0 or later.
- Linux requires Netscape, Version 7.0.2 or later; Opera, Version 7.0 or later; Konqueror, Version 3.1 or later; Mozilla, Version 1.6 or later; or Firefox, Version 0.9 or later.
- Macintosh requires Safari, Version 1.0 or later; Microsoft Internet Explorer, Version 5.2.3 or later; Netscape, Version 7.1 or later; Firefox, Version 0.9 or later; or Opera, Version 7.0 or later.

Other software
- 5250 Print support requires IBM iSeries Access for Web, Version 5.2 or later (available as part of the iSeries Access Family, Version 5.2)
- WebSphere Portal Version 5.0, Version 5.0.2, Version 5.0.2.1 or Version 5.0.2.2 is required for deployment of HATS, Version 6 portlets.

Limitations

- Bidirectional (BIDI) support is available only with Microsoft Internet Explorer, Version 6.0 with SP1; or Mozilla, Version 1.8 or later.

Back-end data sources

- Supports 3270, 5250 and virtual terminal (VT)-accessible applications through any Telnet (TN) server

Performance and scalability

- Provides load-balancing and failover functions through exploitation of WebSphere Application Server workload-management capabilities

Security

- 128-bit data encryption (RC/2, RC/4, Data Encryption Standard [DES] and Triple DES)
- SSL, Version 3.0 support (X.509 certificate)

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